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THE USE AND MISUSE OF LANGUAGE LABORATORIES.

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IF HIGH SCHOOL LANGUAGE LABORATORIES DO NOT COME UP TO EXPECTATIONS IN THE TEACHING PROCESS, IT IS RARELY THE FAULT OF THEIR EQUIPMENT, BUT RATHER A MISUNDERSTANDING OF THEIR USE. A LABORATORY IS AN OUTSIDE-OF-CLASS PRACTICE ROOM OR "LIBRARY," AND TAPES FOR IT MUST BE PERFECTLY CORRELATED WITH CLASSROOM TEACHING MATERIALS. SCHOOL SCHEDULES MUST BE ADJUSTED SO THAT THE LABORATORY MAY BE USED AS AN ADJUNCT OF THE CLASSROOM. EACH MODERN LANGUAGE STUDENT MUST HAVE THE OPPORTUNITY TO USE THE LABORATORY FOR 20 TO 30 MINUTES EACH DAY FOR SUPPLEMENTARY PRACTICE. NEW MATERIALS SHOULD BE OVERLEARNED IN THE LABORATORY AFTER FIRST HAVING BEEN BROUGHT TO THE SAFETY LEVEL IN CLASS. IT IS HELPFUL TO HAVE TEACHERS MONITOR IN THE LABORATORY BUT WASTEFUL TO HAVE THEM OPERATE IT, AND PROCTORS SHOULD BE PROVIDED AS AN EDUCATIONAL AND FINANCIAL ECONOMY. AN AUDIOLINGUAL LANGUAGE TEACHER'S LOAD SHOULD BE LIMITED TO FOUR CLASSES DAILY, WITH NO STUDY HALL, SO HIS VOICE CAN BE SAVED AND HE WILL HAVE TIME TO MONITOR IN THE LABORATORY. THIS ARTICLE IS A REPRINT FROM "THE GERMAN QUARTERLY," VOLUME 38, NUMBER 3, MAY 1965, PAGES 335-344. (AF)

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THE USE AND MISUSE OF LANGUAGE LABORATORIES

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Language laboratories in high schools are being seriously criticized today because they have not come up to expectations in the teaching process. The fault, however, is usually not in the laboratories themselves but rather in the lack of a clear awareness as to how they should be used. I say "usually" instead of "always" because some laboratories obviously consist of hopeless junk. Assuming that the electronic equipment meets acceptable standards, the two most important characteristics of a language program complemented by a laboratory should be the following: 1) The laboratory is an outside-of-class practice room or "library." 2) The taped laboratory materials are perfectly correlated with the classroom teaching materials. A laboratory that is not regularly used as if it were a library and that contains chiefly taped materials that have no intimate relationship with the course materials is a badly misused teaching aid.

It must be made absolutely clear that this discussion is not concerned with the electronic classroom, which may become the predominant language teaching aid in the future. The fact remains that we have a great many full-fledged laboratories in our schools and many of these will be around for quite some time. The problem then is how to use these existing laboratories as they were meant to be used in the first place.

Although it should be clear that the language laboratory came into being as an adjunct of the classroom, and not as a substitute for it, very few schools have actually worked out the logistics of laboratory use as an outside-of-class learning activity. Almost everywhere we look we find that classes are moved from the regular classroom to the laboratory, during class time, and accompanied by the teacher. In the middle of the period the class if often moved back to the classroom to make room for another wave of students migrating with their teachers from class to laboratory. In some schools each class goes to the laboratory only once a week for a whole or a partial period. In others they do it only twice. If they go three times it begins to make a little sense. But even then some negative features remain: 1) the loss of class time for the migrations; 2) the waste of teacher time for them and 3) the misuse of teacher talent (for

pushing buttons instead of teaching). The fact that the teacher may be able to do a little bit of monitoring while also operating the laboratory by no means invalidates the last point.

Many a teacher has, of course, come to realize how much time is wasted in the migration system, and so he has given up laboratory use altogether. He knows that he can get more done by remaining in the classroom and expending the energy it takes to be a merciless drilling machine for five full periods a day. Especially where each class gets to use the laboratory for only a part of a period once or twice a week has disillusionment become apparent. At this rate of use the laboratory never becomes much more than a novelty for the student, and as such it adds nothing, or almost nothing, to the learning process. In some schools the result has been that the shiny gadgets are locked up and are gradually losing their luster because of the gathering dust and rust.

In addition to wasting teacher and student time, the class-migration system frequently results in a serious inefficiency of laboratory use. The laboratory may have thirty positions, but a class of only 20 students monopolizes it because it is fundamentally thought of, and used, as if it were the classroom itself. And because school schedules are usually not constructed with maximum use of the language laboratory in mind, there are periods in the day when the laboratory is locked up. The result is that the laboratory remains idle for a good part of the day and many students are not getting an adequate amount of supplementary practice with the language.

In reflecting upon why many teachers still tolerate this sort of inefficiency one can readily suggest a few reasons: 1) The administration has for one reason or another not seen fit to rethink the school schedule so as to make appropriate outside-of-class use of the laboratory possible. 2) The teacher who has to teach five (and sometimes even six!) audiolingual classes a day understandably welcomes taking classes to the laboratory so that he can give his voice a rest. 3) The teacher feels inadequate for the modeling of new material and prefers to let a native-speaking voice take over this task. 4) There is a rule that the laboratory can not be open unless a teacher is present, and consequently the school budget makes no provision for laboratory proctors. 5) The teacher is afraid not to use the laboratory even though he knows he can get more done without it.

Thousands of teachers who have been in the NDEA language institutes know how a laboratory ought to be used, but they have apparently not been able to teach the administrators what they themselves know so well. One of these institute graduates recently summed it up for me when she said, "When we use the lab, we have to use it in the way we know is wrong." In other words, the urge to take advantage of what the laboratory has to offer, and undoubtedly the "have-lab-so-use-it" pressure, are militating against good teaching and are coercing the teachers into misuse. Perhaps the institute courses on language laboratories should include a few lectures by an expert on the art of persuasion.

A part of the difficulty arises from the fact that many administrators—and perhaps some teachers as well—do not realize what a language laboratory can do and what it cannot do. Government money has been available to help purchase language laboratory equipment, and many school systems have installed elaborate laboratories without first planning how they can best put them to use. The result has been disillusionment because the installation of a language laboratory in a school is only the beginning. Its success depends not on its existence alone, but rather upon how well it can be made to supplement the work of the classroom.

If the language laboratory is to be used as it should be, to take the place of homework rather than of class work, much attention has to be given to the reorganization of the school schedule. The language laboratory is still a newcomer to the schools, and every one concerned must come to realize that the foreign-language students need time in their schedules for outside-of-class laboratory work. Ideally every language student should have the opportunity to work independently in the laboratory for half a period on every school day. This may mean either increasing the number of class periods in the day or limiting the number of subjects that a language student may take to one fewer than there are available periods in his day.

For the purposes of exploring the possibility of efficient laboratory use by students outside of class hours, but during the regular school day, let us isolate the language program from the total program and look at it with a specific sample school schedule in mind. I shall assume that the laboratory has 30 student positions, all equipped with versatile tape recorders. Three of these are intended

to be extras to help insure full efficiency for 27 students, even when some breakdown of equipment occurs. The additional functioning positions may also be used for extra sessions for students who need remedial work. The class and the associated laboratory schedule is presented below.

Daily Modern Language Schedule

Period	Time	Class	Teacher	Laboratory
1	8:00- 8:25	French I	Fusilier	Russian IV — Proctor and Rusky
	8:25- 8:50	German I	Gutmann	Spanish IV — Proctor and Spanilla
2	8:55- 9:20	Russian I	Rusky	French IV — Proctor and Fusilier
	9:20- 9:45	Spanish I	Spanilla	German IV — Proctor and Gutmann
3	9:50-10:15	French II	Fusilier	Russian III — Proctor and Rusky
	10:15-10:40	German II	Gutmann	Spanish III — Proctor and Spanilla
4	10:45-11:10	Russian II	Rusky	French III — Proctor and Fusilier
	11:10-11:35	Spanish II	Spanilla	German III — Proctor and Gutmann
5	11:40-12:05	French III	Fusilier	Russian II — Proctor and Rusky
	12:05-12:30	German III	Gutmann	Spanish II — Proctor and Spanilla
6	12:35- 1:00	Russian III	Rusky	French II — Proctor and Fusilier
	1:00- 1:25	Spanish III	Spanilla	German II — Proctor and Gutmann
7	1:30- 1:55	French IV	Fusilier	Russian I — Proctor and Rusky
	1:55- 2:20	German IV	Gutmann	Spanish I — Proctor and Spanilla
8	2:25- 2:50	Russian IV	Rusky	French I — Proctor and Fusilier
	2:50- 3:15	Spanish IV	Spanilla	German I — Proctor and Gutmann

1) The laboratory has 30 positions of which at least 27 (90%) are operable at all times. It can therefore accommodate at least 432

students for one half period each during any regular 8-period school day.

2) Classes and laboratory sessions run straight through the noon hour. It is assumed that lunch can be staggered and that a half period for some teachers and students will suffice. A regular lunch period could, of course, be added to the schedule.

The schedule is in some ways theoretical, but it is intended only to demonstrate how language classes and laboratory sections can be scheduled so that every student can spend half a period a day in the laboratory outside of class. In addition, it attempts to illustrate how all of the laboratory groups can be monitored without overloading the teachers. That one section of Language I should, after four years, still be a section of Language IV may be only a dream at the present time. But it is hoped that the day will come when the student will be expected to continue with the study of a given language until he learns it. There is little point in his becoming a fugitive from one or two years of one language and ending up by knowing almost nothing about each of two or maybe even three. The guidance counselors might well give this matter some thought. Anyway, the futuristic notion expressed here does not invalidate the schedule for present purposes.

In this schedule there are 16 language classes, with a maximum enrollment of 27 students per class, or 432 students. The classes are evenly distributed over an eight-period school day. Each period is fifty minutes long, and five minutes are provided for change of classes and laboratory clientele between periods. There need be no loss of student time in the laboratory during the mid-period change of clientele because the student can leave the study hall or school library early enough to arrive in the middle of the period, or, if he has the first half of a period in the laboratory, he can remain the full 25 minutes and then go back to the study hall or library.

The schedule has been planned for an eight-period day because there must be a free period in each student's schedule at a specific time. (In some schools a seven-period day will undoubtedly suffice.) The schedule assumes a versatile laboratory installation in which each student can use a different tape in his own booth.

Students who need extra practice can go to the laboratory whenever they and some positions are free simultaneously, no matter

which other language students are using the laboratory. Since language III and IV classes are smaller than Language I and II classes, the extra positions can be filled with the students who are falling behind.

It may also be possible to have the laboratory open before and after school for remedial work by students who are not dependent upon bus transportation. This notion of before- or after-school laboratory use is usually shrugged off as being impractical, too expensive or something else, and it is promptly forgotten. But the educational value of this potential is so enormous that no school administrator can afford to dismiss it lightly. Slow students slow down the whole class in any given subject. But this is more true of an audiolingual language class than any other academic class in school. If the teacher eventually neglects the slow students for the sake of maintaining a more animated pace, they become casualties. It is patently clear that the less talented students need more practice if they are to keep up. Extra laboratory sessions especially for them can do much to close the gap. It means that the class can move along at a brisk pace with a minimum of failures so that the problem of articulation with the right college-level courses is significantly alleviated, if not almost entirely eliminated. The extra effort and outlay required to take care of the individual differences in language aptitude are well worth the price. We know that the language laboratory has the capacity for doing this, but it can't do it when its doors are locked. Good language teaching with flexible supplementary laboratory use can all but eradicate failure entirely. (Dare I suggest an open laboratory on weekends?)

With a schedule such as this the laboratory can be operated at maximum efficiency. The machines do not get tired; if they are well maintained all of them can work all day long. Here it should be emphasized that maintenance is of vital importance. If some equipment is out of order most of the time, the laboratory becomes smaller by so many machines, and some students will be deprived of their laboratory practice. It is absolutely essential to have a maintenance person on call to see that the equipment is kept in good working order. But even if immediate reparation can regularly be initiated, it is obviously impossible to restore every machine within minutes after the breakdown occurs. For this reason it is well to

have several spare units available, just as we carry spare tires in automobiles. In many laboratories the replacement of a machine is so simple that the proctor can quickly make the substitution. The policy of providing standby units is imperative if the delay that can be expected between breakdown and repair is likely to interfere with full laboratory use.

In the schedule provided each of the four teachers teaches four classes, one at each level in the four-year sequence. In addition, each teacher has four half-periods for monitoring the entire laboratory clientele. For this reason the customary study hall duty is dropped from the teacher's schedule. Two full periods daily remain free for conferences, planning, lunch and paper-marking.

Now, if the teacher must teach five classes, then the monitoring assignments should be reduced correspondingly. Each laboratory session could then be monitored only every other day. It is far better to slight the monitoring in this way than to wear out the teachers. After all, there is much opportunity in class to engage in rapid-fire individual drill work during which faulty speech habits can be detected as soon as they occur. The issue of the teacher's energy and especially the voice energy is a serious one. Some teachers find it very difficult to conduct five periods of intensive audiolingual drill work at maximum efficiency in one school day. In fact, some of them lose their voices by the end of the day. Others find that their voices get weaker and weaker by the end of the week. A few do not even recover completely over the weekend.

Where teachers must teach five audiolingual classes per day, it is imperative that they have a tape recorder or a record player at their immediate disposal at all times. A ten-minute drill session in the middle of each period with a machine presenting the stimuli and the reinforcing responses will provide some needed rest for the teacher. This is especially important for teachers who have first- and second-level classes only, for these are the most taxing as far as the voice is concerned. It is for this reason that the schedule provided suggests an alternation of teaching periods and periods for other activities.

A tape recorder in the classroom is also the best solution for the non-native teacher who prefers to model new materials with a native-speaking voice. This is true whether he teaches four or more

classes because it is far more efficient and orderly to turn on the tape recorder when new material is to be presented than it is to make the round trip to another part of the building. Aside from the time it takes to go there and back, there is unfortunately also the time that it takes to settle down the class two additional times during one school period. In an audiolingual approach to language teaching every minute is valuable. It is quite different from social studies classes I have observed in which the teacher gives the students the last half of the period to prepare the next assignment.

Student or other full- or part-time proctors should be hired to take over the routine work of running the laboratory. With the emphasis our schools put on training for citizenship, it should be possible to find enough reliable students to assume this kind of responsibility, even when there is no teacher present. If our society can tolerate sixteen-year-olds driving expensive and powerful automobiles on the highways, then it can also get used to having them run our laboratories. At least the laboratories are not lethal weapons.

But if a teacher must be in the laboratory whenever it is open, he should also be left free to teach those students who need individual help most. If it is fully understood that the language laboratory should supplement the class work and relieve the teacher of tedious drill work, it will also be seen that the use of proctors is an economy in the long run. Student proctors can be appointed for a dollar an hour (or perhaps even the honor), but teacher-proctors cost more like five. After all, the idea is to get maximum education out of every tax dollar.

Throughout this discussion of the use and misuse of the laboratory it has been assumed that the teaching approach is audiolingual. Language laboratories and audiolingual approaches to language teaching appeared almost simultaneously and seem to be inseparable. While it is possible to have a good audiolingual program without a language laboratory — in spite of what the laboratory equipment salesman may say — it is not possible to make effective use of a language laboratory unless the audiolingual approach is used in the classroom. The laboratory is not necessary for teaching word lists or grammar rules, and it should never be regarded as a novelty or plaything but rather as an integral part of the language program.

This means that the classroom and laboratory materials should be perfectly correlated. The taped dialogues, basic sentences and struc-

ture drills should be the very same ones that have already been presented and partially mastered in class. Such materials are now available commercially and are, on the whole, superior to anything the teachers can produce themselves, if only because they do not have the time. The class drills and their counterparts in the laboratory should be designed so as to accent especially the points of conflict between the native and the target language. Everything that is new to the student should first be brought to the "safety level" in class by the teacher before the students are sent to the laboratory for overlearning of the same material. Exceptions to this are, of course, quite desirable in advanced courses, in which linguistically appropriate cultural materials on tape are used for variety in listening practice and for enrichment.

The safety level is that level of accomplishment which insures that every student is hearing what he is supposed to be hearing and that he is echoing the material with accuracy. He has learned it, he knows its meaning, but he has not yet fully memorized it. For example, he may be able to repeat each line of a new dialogue perfectly after the teacher, but he may be far from being able to recite the whole thing or even one of the roles by himself. But he is now at the safety level and is ready for the additional laboratory drill that results in overlearning. The teacher is no longer indispensable except for checking on the results and correcting any errors that may have crept into the student's speech somewhere between one class and the next.

The errors that are manifested between the attainment of the safety level and the next class tend to be more frequent when the transition to reading is made. This is when the audiolingual teacher has to be an extremely alert detective during class recitation. Limiting class work to choral drill at this time is ruinous. Too many students will simply practice too many mistakes which the choral noises conceal. Individual work, and lots of it, is especially important just after reading starts. If it were not for the interference of the sound-letter correspondences of English, the teacher's task would indeed be far easier. But the interference will be there and must be dealt with immediately. If the laboratory is monitored, so much the better, for it means that distorted sounds can be picked up sooner.

A few people in the profession disagree with the principle that all new material should first be presented in class and brought to

the safety level. Some programmed language courses for use with teaching machines were inspired by this opposite philosophy. However, a number of the original programmers have since become disillusioned with the results of teacherless approaches. These people are returning to the position taken here, namely, that the teacher should present new material and that the machines should be relegated to the task of overteaching and reinforcing. Until we have far more evidence proving conclusively that average students can learn new material well from machines only, we had better stick to the principle of the classroom safety level. If current experiments, such as those being conducted at Indiana University by Albert Valdman, prove this rigid position to be unnecessary, no real harm will have been done. But for the present, skepticism will remain because the tape recorder has no face and because many students are lacking in precise phonetic discrimination. They hear what they are in the habit of hearing in the mother tongue and thus reproduce distortions. By the time somebody discovers that English has interfered, the distortion may be a habit that is hard to uproot.

For the benefit of those people who have the time only to read the first and last paragraph of an article, I should like to conclude with a summary statement of the main principles I have argued for. If we want to get our money's worth out of language laboratory equipment, we must learn to adjust school schedules so that the laboratory can be used as an adjunct of the classroom, that is, as a "homework" practice room to be used only outside of language class hours. Every modern language student should and can have the opportunity to use the laboratory for twenty to thirty minutes every day for supplementary practice with tapes that are meaningfully correlated with the work in class. New material should first be brought to the safety level in class, and it should be overlearned in the laboratory. While it is very helpful to have the teachers monitor in the laboratory, it is wasteful of their talent to have them operate it as well. It is an educational and financial economy to provide responsible proctors. Constant and prompt maintenance is indispensable. Finally, serious consideration should be given to limiting an audiolingual language teacher's load to four classes daily, with no study hall, so as to save his voice and to provide him with time to monitor the practice sessions of his students in the laboratory.

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